

ADOLESCENT SUBSTANCE USE SCREENING, BRIEF INTERVENTION, AND REFERRAL TO TREATMENT ADVANCING LEARNING AND KNOWLEDGE

Conrad N. Hilton Foundation Substance Use Prevention Initiative



This paper explores how the Conrad N. Hilton Foundation's Substance Use Prevention Initiative (the Initiative) has advanced the knowledge base for adolescent substance use screening, brief intervention, and referral to treatment (SBIRT). In order to inform future discussions about youth substance use prevention policy and practice, this paper discusses the Initiative's contributions to the substance use prevention field.

Since 2013, the Foundation has awarded more than \$75 million to fund the work of 54 grantees. Several overarching lessons have emerged from the Foundation's past five years of substance use prevention grant making:

1. Successful implementation of the SBIRT framework in the settings that provide access to large numbers of youth (schools, school-based health centers, primary care, community-based programming, juvenile justice (JJ) is achievable.
2. The need to screen youth in a wide variety of settings to identify risk for substance use is critical, as a substantial proportion of screenings in these settings indicated a need for brief intervention (BI) (12%) or specialty treatment for substance use disorder (SUD) (2%).
3. Many youth-serving providers feel unprepared to address substance use risk for reasons related to lack of knowledge about how to effectively address substance use, limited reimbursement options for services, and issues related to confidentiality. Some of these barriers can be mitigated through SBIRT training and technical assistance.
4. Referral to specialty treatment for SUD presents a challenge in terms of limited or even the absence of treatment resources for youth in many areas and requires active development of provider networks and additional services and supports for youth.
5. Prevention and early intervention of youth substance use requires a multi-faceted approach, including concurrent identification and intervention for mental health concerns and other risk factors.

METHODOLOGY

This paper draws on interviews with grantees, information abstracted from grantees' funding applications, annual progress reports, grant-end reports, and evaluation data. Data were collected from each grantee quarterly and reflected both process and outcome measures.

► About The Authors

Abt Associates serves as the Monitoring, Evaluation, and Learning (MEL) partner for the Conrad N. Hilton Foundation's Substance Use Prevention Initiative. Abt Associates works with the Hilton Foundation and its grantees to measure progress toward advancing the goals of the Initiative; identify key areas of learning and develop recommendations for the Foundation, grantees and stakeholders; collect data and advise on improvements needed to strengthen delivery systems and improve local evaluation capacity; and identify aspects of systems change needed to sustain implementation prevention and intervention activities and support scalability.

► About The Foundation

The **Conrad N. Hilton Foundation** was created in 1944 by international business pioneer Conrad N. Hilton, who founded Hilton Hotels and left his fortune to help individuals throughout the world living in poverty and experiencing disadvantage. The Foundation invests in 11 program areas, including providing access to safe water, supporting transition age foster youth, ending chronic homelessness, hospitality workforce development, disaster relief and recovery, helping young children affected by HIV and AIDS, and supporting the work of Catholic sisters. In addition, following selection by an independent international jury, the Foundation annually awards the \$2 million Conrad N. Hilton Humanitarian Prize to a nonprofit organization doing extraordinary work to reduce human suffering. From its inception, the Foundation has awarded more than \$1.8 billion in grants, distributing \$112.5 million in the U.S. and around the world in 2018. The Foundation's current assets are approximately \$2.8 billion. For more information, please visit www.hiltonfoundation.org.

INTRODUCTION

BACKGROUND

Adolescent substance use is a leading public health concern and is a predictor of serious long-term physical, mental, and social consequences. The 2017 National Survey on Drug Use and Health found that five percent of youth 12-17 years old in the United States and 37 percent of young adults 18-25 reported binge drinking at least once in the prior month before they were interviewed; and eight percent of 12-17 year olds and 24 percent of 18-25 years olds reported using some illicit substance during that same time period.

Decades of research have highlighted the health and safety concerns of alcohol and other drug use in adolescence, a period critical for brain development. This period is also a time when youth are particularly vulnerable to what can be a behavior with serious consequences, including traffic accidents, poor school performance, family problems, and arrest and incarceration. In addition, research shows that youth who use substances in adolescence are at greater risk of developing substance use disorders as adults. Studies related to understanding and predicting youth substance use trajectories point to how a young person's decision to use alcohol and drugs is linked to risk factors, including peer substance use, undiagnosed mental health concerns, trauma, family and community attitudes about substance use, neighborhood poverty and violence, and family transition and mobility.

Substance use prevention strategies that increase protective factors (e.g., family support, positive peer relationships, high academic engagement) and address youth substance use more holistically can effectively intervene with young people during this critical period of growth and development.^{vi} Further, by taking risk factors into consideration, these strategies prevent more serious problems from occurring. Preventing initiation and reducing escalation of use and related harms require the implementation of effective programs and policies. Evidence-based interventions to identify use, delay onset, or stop the progression of substance use can halt the development of a SUD and adverse effects on an individual's health, development, relationships, and life trajectory.

SCREENING, BRIEF INTERVENTION, AND REFERRAL TO TREATMENT (SBIRT)

SBIRT is an evidence-based approach to identifying and addressing substance use and related risks among youth.^{viii,x} In the SBIRT framework, youth are screened to identify potential risk and provided a brief counseling intervention or a referral to specialty treatment services if screening indicates a more acute need. SBIRT is designed to be a brief, stepped approach that can be administered in a variety of settings by youth-serving providers. The framework enables settings and systems to screen a large number of individuals who might otherwise go unnoticed until untoward consequences of use occur (e.g., chronic school absenteeism, emergency room visits, Driving Under the Influence (DUI) incidents) and intervene before the need for treatment becomes critical. Validated screening instruments are designed to be short, unthreatening, easy to understand and result in a "score" or the identification of a threshold from which next steps, if any, can be determined. For those youth who do not appear to have any current

need for an intervention, the framework provides the opportunity to provide feedback, reinforce positive behaviors, and give anticipatory guidance on substance use to a wide range of youth. For those youth who indicate a minor involvement with substances, a brief counseling or BI becomes the next step.

Brief counseling interventions incorporate motivational interviewing techniques which engage the individual in enhancing motivation to attenuate or eliminate the behavior and set reachable goals. When the screening and resulting discussion result indicates a more serious problem, the referral to treatment (RT) process moves the youth to community-based resources and/or specialty treatment options to receive a more comprehensive assessment.

Based on extant research, in 2011 the American Academy of Pediatrics (AAP) released a policy statement and clinical guidelines that recommended the use of SBIRT as part of routine pediatric care. The AAP updated the policy statement in 2016. Federal agencies like the Substance Abuse and Mental Health Services Administration (SAMHSA), the National Institute on Drug Abuse (NIDA), and the National Institute on Alcoholism and Alcohol Abuse (NIAAA) have all supported SBIRT in their activities and principles of care, laying the groundwork for further dissemination and implementation of SBIRT for youth.

THE HILTON FOUNDATION'S PREVENTION STRATEGY

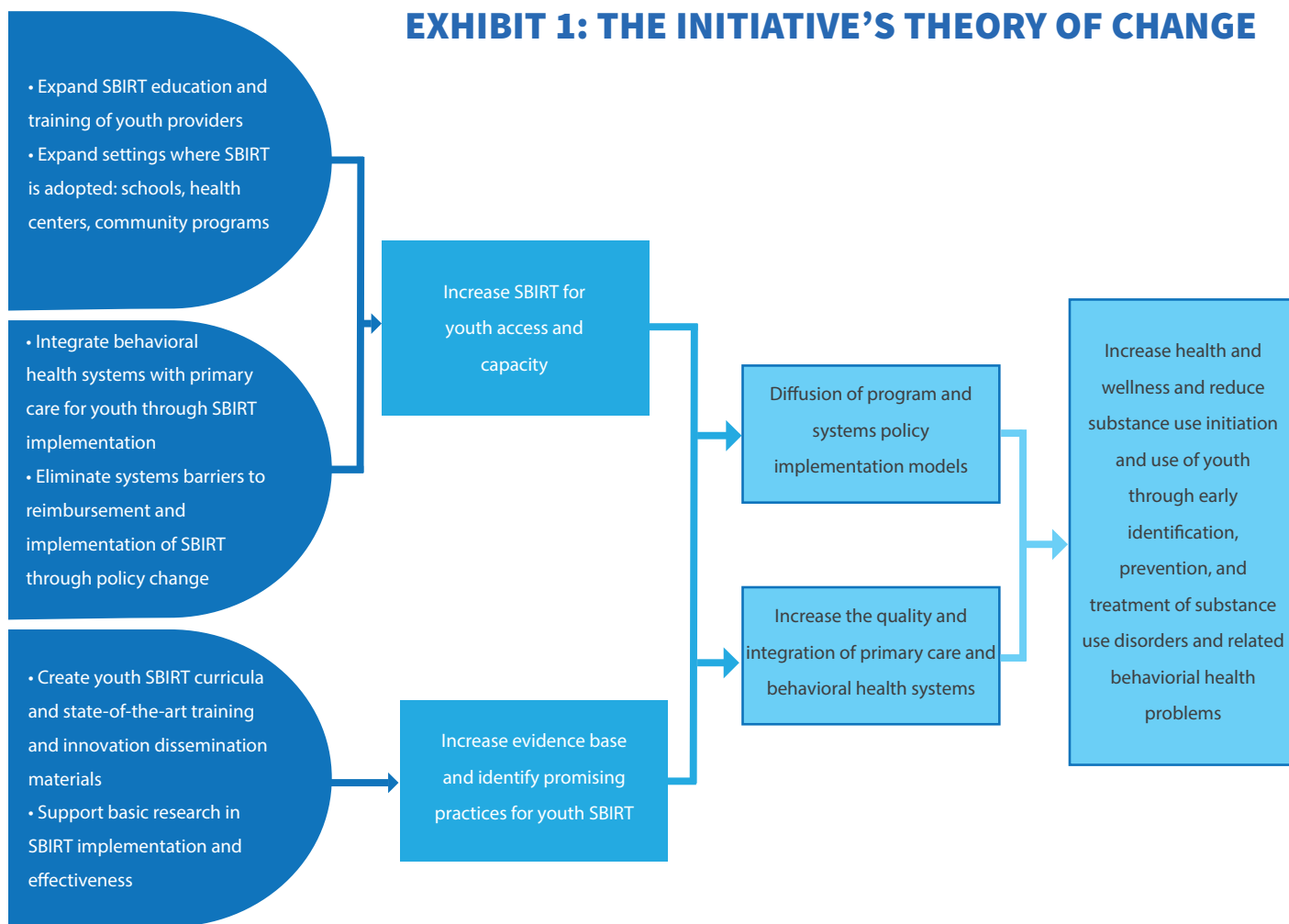
Since 1982, the Conrad N. Hilton Foundation (the Foundation) has addressed youth substance use by funding promising prevention programs. In 2013 the Foundation initiated a new direction in its investments by launching an Initiative focused on prevention and early intervention through advancing the SBIRT framework across a range of organizations working in new settings that serve youth ages 15-22. The Foundation established three specific goals for the Initiative:

- 1. Ensure health providers have the knowledge and skills to provide screening and early intervention services;**
- 2. Improve funding for, access to, and implementation of screening and early intervention services; and**
- 3. Conduct research and advance learning to improve screening and early intervention practices.**

Based on the existing body of SBIRT evidence and guided by a theory of change (Exhibit 1), the Foundation designed a five-year strategy focusing on strengthening the skills and capacity of the youth-serving workforce. This strategy would increase access to and availability of SBIRT and expand the evidence base of prevention and early intervention services through policy, programs, communications, and advocacy. To date, the Foundation has awarded more than \$75 million to fund the work of 54 grantees.

The Initiative's overarching purpose was to prevent initiation and reduce escalation of substance use in order to increase health and

EXHIBIT 1: THE INITIATIVE'S THEORY OF CHANGE



wellbeing of youth age 15-22. To achieve this goal the youth-serving workforce must be equipped with the needed knowledge and skills to provide SBIRT, and policies and practices must be adjusted or changed to increase access to quality, efficient services.

The Initiative's theory of change was designed to achieve individual- and systems-level impact. At the *individual level*, SBIRT provides an opportunity to normalize conversations for youth and young adults as part of routine service delivery in the many systems where they receive services, including physicians' offices, schools, and school-based health centers, JJ and other community-based programs. In this way, youth-serving providers can reach a large, often previously unidentified, segment of the population before substance use risks escalate.

At the *systems level*, in the past the SBIRT framework has primarily been applied in the healthcare system, and the Foundation's Initiative has expanded that reach to community programs and other systems such as JJ, education, and mental health. The Initiative's systems-level work also focused on those policies that affect the likelihood of whether SBIRT can be implemented, sustained, and given the support needed to flourish in healthcare and the new settings.

Since the Initiative was launched, much of the initial evaluation focused on education and awareness about youth SBIRT, field building, including the development and dissemination of training and technical assistance resources, and investing in implementation and evaluation projects to better understand how well SBIRT works in the real world. Following an organizational decision in May 2018, the Foundation is slowly phasing out of four program areas over the next few years,

including the Substance Use Prevention strategy under which the SBIRT work is funded. As a result, the Foundation will reorient its focus during this final phase towards: summarizing the areas of investment, analyzing key contributions to the field, and disseminating findings.

GUIDING QUESTIONS

The intent of this initial phase was to explore feasibility and application of youth SBIRT in different settings. As the Foundation started the expansion of SBIRT, testing new approaches in new settings, it is not surprising that few programs were positioned in this early period for an outcomes evaluation. However, as grantees now begin to wrap up their work under the Initiative, an important goal of the evaluation is to support the grantees and the Foundation in synthesizing and sharing key learnings and preliminary results to inform future discussions about youth substance use prevention policy and practice. This paper reviews key contributions the Initiative has made to the substance use prevention field and explores how the Initiative has added to the knowledge base for youth SBIRT.

In the following section, learnings are presented in response to these key evaluation questions:

- **Can SBIRT be successfully implemented in a variety of youth-serving settings?**
- **What are the essential elements of that success?**
- **What contributions has the Initiative made to the evidence base for youth SBIRT?**

WHAT WE'VE LEARNED

SBIRT CAN BE SUCCESSFULLY IMPLEMENTED IN A VARIETY OF YOUTH-SERVING SETTINGS

One of the primary aims of the Initiative was to investigate whether SBIRT can be successfully implemented in a variety of settings to 1) expand youth access to prevention and intervention services and 2) prevent, delay the onset of, or reduce youth substance use. To address these questions, grantees designed and conducted multiple implementation and research projects; some of these projects and studies have reported final results, but some are still underway with completion to occur prior to the end of the Initiative. In this section, we review the findings from projects that have completed implementation, as well as preliminary findings from studies that are still in the implementation or analysis stages. After reviewing the state of implementation to date and discussing elements of success, we will describe ongoing research and the open questions still being investigated by grantees.

INCREASING ACCESS AND CAPACITY FOR YOUTH SBIRT: NEW SETTINGS

Through implementation and research projects, grantees have piloted the implementation of SBIRT in new settings and developed and refined SBIRT tools and models for subpopulations of youth. Since 2013, the Initiative has partnered with grantees in their expansion of SBIRT to more than 900 sites across the country. These sites represent settings where youth routinely interact with adults and places with high concentrations of at-risk youth, such as healthcare settings, schools and school-based health centers, community-based organizations, community behavioral health organizations, and JJ programs. Through the Initiative, sites from all of these sectors incorporated SBIRT into their workflow, trained staff, and screened and provided services to youth either onsite or through referral, with many sites utilizing the SBIRT approach for the first time (described in further detail below).

Pediatric primary care practices, including community health centers, are well suited for SBIRT as youth routinely receive other health screenings in these settings, and substance use screening can be integrated into existing workflows. Through the Initiative, several grantees expanded the implementation of youth SBIRT in pediatric primary care settings, and over 37,500 youth were screened as a result. Of those screened, five percent received a BI and one percent received a RT. Grantees found that multiple factors influence the degree to which SBIRT services can be implemented in primary care, including limits on provider time, staff turnover, changes in workflow, organizational buy-in, availability of technology (e.g. tablets for screening, electronic health records), access to specialty treatment networks, and reimbursement for services. By identifying these factors and testing strategies to address them, grantees were largely successful in extending the reach of adolescent SBIRT in primary care settings.

Community behavioral health organizations (CBHOs) are effective locations to reach youth, including those who come in repeatedly over time for routine mental health related visits, as well as those who come in for acute care. Under the Initiative, CBHOs screened a total of 4,987 youth, and providers at these sites provided BI to 37 percent and a RT to eight percent of those screened. One grantee examined the impact of BI in reducing or delaying substance use among youth who

receive services at the CBHOs operating as part of its grant; findings indicated that among the youth screened at these CBHOs, 44 percent had reduced screening scores when assessed at a subsequent visit.

Juvenile justice programs are an area where it is critical to identify and provide information and support to youth who are at high risk of developing SUD, but where SBIRT has not been widely utilized. Through the Initiative, SBIRT was implemented in 17 sites serving justice-involved youth. More than 490 youth were screened in these sites. One study in JJ programs assessed the impact of SBIRT not only on substance use but also on repeat arrests, school disciplinary actions, and internal and external disorder scores among youths served. Results from this work showed that a large proportion of youth screened in JJ settings scored in need of a referral to treatment; of those referred and attending treatment, there was a significant change in the substance use and related mental health symptom scores during at least one of the two follow-up periods (three and six months).

SBIRT was also successfully implemented in 290 **schools and school-based health centers**. As a result, 42,904 youth were screened in these settings, seven percent were provided a BI and one percent a RT. In New Mexico, SBIRT was implemented in 32 school-based health centers across the state. In this project researchers compared reductions in substance use between sites that utilized the SBIRT protocol and sites that did not. Results showed that there were statistically significant decreases in 30 day use of tobacco, alcohol and marijuana in the youth being served at SBIRT protocol sites compared to no decreases in the non-SBIRT sites.

Schools are a logical setting to introduce prevention messages, administer BIs, and identify youth in need of more formal treatment. Traditionally, schools have relied on educational messaging alone. In exploring the effect of a more traditional approach (educational materials) versus a BI after screening, one grantee assigned youth in schools either to screening and BI or to a screening and brief education. The goal was to determine whether there were significant differences between those students screened and provided BI versus those screened and provided educational materials on subsequent substance use. Both groups were followed at six and 12 months, and differences in frequency of use as well as school performance outcomes such as number of days suspended, days in detention, and missed school were compared. The differences between the two groups were in most cases small; in some cases the differences were counterintuitive and due to methodological limitations, inconclusive. At the six-month follow-up, there was a small difference in the rate of students initiating marijuana use, between those receiving the BI and those receiving brief educational intervention, but the positive direction favored the brief education group. In the case of alcohol initiation at a six-month follow-up, however, the BI group showed small but more improved results over the brief education group.

Through the 312 **community-based organizations** that implemented SBIRT through the Initiative, 4,240 youth were screened, and of those, 87 percent received a BI and 13 percent a RT. The community based programs funded by the Initiative were part of a nationwide network (YouthBuild USA) focused on providing job skills training and leadership development opportunities for youth from low income, and higher risk, circumstances. These programs implemented SBIRT in settings where no such substance use prevention screening had been tried before.

INCREASING ACCESS AND CAPACITY FOR YOUTH SBIRT: TRAINING THE WORKFORCE

Fundamental to the Initiative's strategy was *training youth-serving providers* on SBIRT, including the use of validated screening tools and evidence-based motivational interviewing techniques. While youth routinely cross paths with providers in each of these settings, few providers had been trained in using structured SBIRT techniques to identify and respond effectively to youth substance use, once it was identified. This was due in part because a standardized training approach or curricula for use with youth populations had not been developed for widespread use. Consequently, one of the Foundation's first areas of investment was to support a range of activities to educate providers about the importance of addressing adolescent substance use as a health concern and how SBIRT could serve as a framework for them to address it. Grantees disseminated information about youth substance use risk and SBIRT to more than 900,000 providers and trained nearly 42,000 individuals, including those in the youth-serving workforce, as well as nursing and social work students, medical residents, and addiction medicine fellows. Informational and training materials developed by grantees included an implementation checklist; an interactive, online SBIRT training technology platform; toolkits and an adolescent primary care change package (i.e. SBIRT implementation guide that provides operational and clinical guidance and benchmarks) fact sheets about effects of alcohol and marijuana use; evaluation tools; case studies; and guidance around billing and reimbursement for SBIRT services.

The Foundation is laying the groundwork for continued workforce expansion through dissemination of well-developed curricula and the establishment of addiction medicine fellowship programs across the country. In collaboration with the Foundation, the American College of Academic Addiction Medicine (ACAAM) has taken important steps toward this goal. In 2016, its efforts to formally certify addiction medicine as a subspecialty by the American Board of Medical Specialties was successful, and in 2018 the Accreditation Council for Graduate Medical Education opened a pathway for a subspecialty training program in addiction medicine. Thus far, 70 Addiction Medicine Fellowship programs have been accredited, and by the end of this year, nearly 300 fellows will have completed training. Most importantly, these addiction medicine fellowship programs now include educational modules on prevention and early intervention for the first time. NORC at the University of Chicago (NORC) designed and implemented a classroom-based curriculum and virtual patient-provider simulation program in more than 80 schools of nursing and social work, through which nearly 16,000 students received education on adolescent SBIRT. ACAAM and NORC continue to expand their efforts, bringing competency-based SBIRT training to a wide audience of current and future health professionals.

THE ESSENTIAL ELEMENTS OF SUCCESS

The Initiative has successfully extended the reach of the SBIRT framework through the projects described above, however, as with any practice change effort, implementation requires a thoughtful approach in order to anticipate and address challenges. Some of the most common include issues related to change in *workflow*, confidentiality, reimbursement, and the availability of treatment options in their area. For example, in primary care settings, practices learned they need to dedicate sufficient time to creating a usable workflow to determine which staff should administer the screen, when it should occur, and how to fit the protocol into daily routine. Practices developed innovative solutions, such as

implementing a tablet-based screening while the youth waits for the appointment and incorporating a brief screen administered by allied health professionals rather than primary care providers.

Confidentiality also needed to be addressed across settings, particularly in schools, where grantees faced questions regarding whether youth can be screened without notifying their parents. Some schools found that they were able to send out general notices regarding a universal screening plan and utilize what is termed "passive consent," that is, if a parent does not specifically object to the screening for their child, then screening can occur. Other schools sent home a more formal consent document to all parents agreeing to a health screening that included alcohol and substance use questions. Grantees found the majority of parents did not refuse the screening.

Reimbursement, i.e., payment for screening and BI, is another important consideration for implementation. Grantees expressed that billing differences by state, provider, and setting type, along with the complexity of Medicaid payments and licensing restrictions, made navigating this issue challenging for many. For example, while school health practitioners are generally able to use time already part of their regular activities for SBIRT, pediatricians had to determine how the time could be reimbursed through specific Medicaid or insurance categories available in their state. Though most states have approved Medicaid codes for the reimbursement for SBIRT for Medicaid patients, some have not, and in some states, the codes may only be used in medical settings or are restricted to certain professional classes, e.g., physicians, for use. The Foundation has invested in increasing understanding of and access to financing for SBIRT through policy analysis and dissemination of information regarding usable cost reimbursement codes and strategies across the states for increased utilization of codes. In numerous states the Foundation has funded advocacy that has resulted in activation of Medicaid codes. Georgia is one example; in other states, it has supported creation of other state funding sources. One grantee developed an online, interactive map with information on billing for substance use prevention and early intervention that includes information on which state Medicaid programs have strong preventive substance use coverage. This represents one example of how the Foundation's investment in this area has benefitted the broader field.

An important finding from this work is that the **referral to treatment** (RT) portion of the protocol was a significant challenge for many sites because most had never interacted with the specialty SUD service system before. While it is important to note that only a relatively small proportion of youth screened required formal SUD treatment, a greater proportion would benefit from a referral to other types of services and supports, such as mental healthcare, prosocial activities, and mentoring programs. Many providers had very limited knowledge of what treatment options were available and what options are considered evidence-based. In addition, many providers were in areas with limited access to formal treatment services for adolescents. As a result, many providers, even those in primary care, felt unprepared to determine what type of referral was the most appropriate for the youth and their families based on screening results. Lack of patient ability to engage in treatment, as well as the absence of high quality, affordable treatment options, were also noted barriers. This remains a source of difficulty for providers, both in terms of identifying a provider for referral and in tracking that referral to ensure that the individual received treatment. In some instances, grantees reported that potential sites declined to participate in SBIRT programs because they felt they did not have

an adequate referral network. An approach that proved successful in New Hampshire was the development of referral networks across the state, which resulted in nearly 70 percent of participating practice sites building new relationships or partnerships with other organizations including treatment centers, behavioral health providers, school-based student assistance program counselors, and primary care practices.

INCREASING THE EVIDENCE BASE AND IDENTIFYING PROMISING PRACTICES

One of the goals of the Initiative is to further the evidence base for adolescent SBIRT and disseminate findings in the field. In the previous section, we described results and lessons learned from the implementation of SBIRT in various settings. Now we will turn to studies that are still underway, including some that have kicked off within the past year. Although the Initiative as a whole has entered its final stage, comparatively, the research component is still in its early stages. The Foundation has funded rigorous, longitudinal studies designed to answer complex research questions pertaining to the efficacy and effects of various SBIRT tools and models. The summaries below provide glimpses of the research questions that will be answered by the end of the Initiative. For further detail on these studies (e.g., timeline, sample, setting, and outcome measures), please refer to the table in the Appendix.

- **Boston Children’s Hospital** is conducting a longitudinal cohort study of youth to develop a set of SBIRT outcome measures and a randomized controlled trial (RCT) of a BI for medically vulnerable youth.

- **C4 Innovations** is conducting an RCT of a brief mentoring intervention delivered by a young adult peers for youth at mild to moderate substance use risk.

- **Friends Research Institute** is using a stepped wedge cluster randomized design¹ to assess the impact of the National Council for Behavioral Health’s Facilitating Change in Excellence in SBIRT (FaCES) change package.

- **Kaiser Foundation Research Institute** is developing a predictive analytics model to identify youth at greatest risk of developing SUD based on clinical and demographic data. The model creates ‘risk profiles’ of youth to be used by health systems and other youth-serving organizations for targeted prevention and intervention efforts.

- **Iowa State University** is exploring whether providing SBIRT as an adjunct to an evidence-based primary prevention model (Promoting School-community-university Partnerships to Enhance Resilience (PROSPER)) strengthens the prevention of risky behavior, promotes positive youth development, and strengthens families.

- **Reclaiming Futures** is conducting a school-based pilot of a framework that integrates SBIRT with school discipline reform practices, and measuring impact of an SBIRT protocol adapted for youth with JJ involvement.

- **Seattle Children’s Hospital** is conducting an implementation evaluation of its Check Yourself screening tool in primary care and school-based settings and a mixed-methods evaluation of the Best Starts for Kids School-based SBIRT initiative, which utilizes a school-based version of Check Yourself to deliver screening and

brief intervention in 50 middle schools in King County, Washington. Check Yourself is a teen-friendly eHealth tool that delivers screening and motivational personalized feedback to teens, and provides a summary report for professionals who work with teens within the setting that they were screened.

- **University of Minnesota**, in partnership with the Kaiser Permanente Northern California Division of Research, is conducting an RCT of an adolescent SBIRT model (MPower) in school and primary care settings. Building upon prior research, this study compares traditional, single-session BI to an expanded BI intervention for teens. The study is testing a group format for SBIRT as well as the inclusion of parents in the SBIRT model.

- **University of New Mexico** is evaluating the implementation and impact of its Strategic Implementation of SBIRT in SBHCsS (SISS) program, which aims to engage youth in SBHC behavioral health services. The SISS trains providers on youth-centered communication skills and an approach that considers adolescent substance use respectfully and holistically with the comorbid conditions of depression and anxiety. SBIRT coordinators support the meaningful use of electronic health records to enhance SBHC substance use care.

- **University of Vermont** is conducting a longitudinal study to assess if its Wellness Environment (WE) program, partnered with SBIRT, is an effective tool to promote health and wellbeing, and decrease substance use behavior, in college students. WE is a neuroscience-inspired behavioral change program that provides an alcohol- and drug-free residential community, educational courses, and other resources to promote a healthy lifestyle for participants.

A significant amount of research is still underway, and we anticipate findings to emerge throughout the course of the Initiative’s phase out period. Abt Associates’ evaluation team will report on aggregate findings in upcoming learning briefs and a summative report at the conclusion of the Initiative.

NEW DIRECTIONS AND NEXT STEPS

The SBIRT framework was originally developed as a tool for screening adult patients in medical settings—emergency departments and primary care clinics—and was shown to be successful in identifying and intervening in adult alcohol problems. Through the Initiative, the Foundation took on the work of expanding this success to reach a critical population—youth who are at an age when substance use is often initiated and risk can be identified and addressed before adverse consequences to health and safety begin to appear.

The Foundation established an ambitious set of goals for the Initiative, and ultimately succeeded in 1) introducing SBIRT into places where youth can easily be accessed, 2) preparing the provider field to identify and address substance use effectively, and 3) disseminating findings to the broader field. The Initiative has accomplished noteworthy results, including demonstrating that large numbers of youth can be reached with simple screening techniques and early risk can be addressed through a brief intervention. In addition, the Foundation’s investments in developing and distributing training and SBIRT curricula have been met by a provider field ready to adopt effective approaches.

¹A stepped wedge cluster randomized design begins with a time when none of the clusters (or individuals) are exposed to the intervention. Then at defined intervals, or steps, a cluster is randomized to receive the intervention until all of the participants in the study have received the intervention. Data are captured throughout the process for all clusters giving both an outcome of the intervention and a control for any historical trends.

The Initiative also identified some of the stumbling blocks to addressing the complex problems of youth substance use and funded grantees to explore and develop solutions. These included creating pathways to payment options and billing codes for services, identifying treatment networks, and highlighting the role of mental health issues in youth substance use. Many of these factors were not initially anticipated in the theory of change, but continuous learning and sharing across grantees strengthened the Foundation's understanding of what is required to achieve the desired outcomes of the Initiative. These learnings point to areas where the field should move next, including sustaining SBIRT in these settings through policy change, expanding the lens on substance use issues to include mental health screening and services, exploring the role of parents and peers in interventions, to name a few.

The Initiative will continue to collect information on successful implementation and outcomes of youth SBIRT, building on what has been learned thus far. Data are being collected on short- and longer-term outcomes of various SBIRT programs and studies. Some grantees are using electronic health records to track outcomes for large numbers of youth over time and others are conducting traditional random controlled study designs of varying elements of SBIRT practice. Still others are introducing innovative technology driven methods of delivering SBIRT as well as expanding the framework to include broader health and wellness issues identified in the first phase of the Initiative.

Dissemination of findings and key lessons to the broader field is an important charge for the final phase of the Initiative. Through this series of learning briefs, we will further explore and disseminate results to both the practitioner and policymaking communities.

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APPENDIX: SUMMARY OF ONGOING RESEARCH

Grantee, Overview	Study Period	Sample	Setting	Outcome Domain
<p>Boston Children’s Hospital is conducting a longitudinal cohort study of youth to develop a set of outcome measures for real-world clinical settings to assess the short-term impact of SBIRT. They are also designing and testing a BI for medically vulnerable youth through a randomized controlled trial (RCT).</p>	2014-2019	Youth ages 14-18	Primary care	<ul style="list-style-type: none"> • Substance use • Substance specific harms
	2014-2019	Youth ages 14-18 with chronic medical conditions	Pediatric endocrine, rheumatology, and gastroenterology clinics	<ul style="list-style-type: none"> • Substance use • Perception of risk • Substance use knowledge and attitudes
<p>C4 Innovations is conducting an RCT of a brief mentoring intervention delivered by a young adult peers for youth at mild to moderate substance use risk. C4 demonstrated preliminary effectiveness of the intervention in a previous study and is now conducting an RCT to establish the intervention as an evidence-based practice.</p>	2018-2021	Youth ages 13-17	Schools	<ul style="list-style-type: none"> • Substance use • Self-efficacy • Peer influence • Coping skills • Perception of risk • Community resource navigation
<p>Friends Research Institute is studying the effectiveness of an adolescent SBIRT change package developed by the National Council for Behavioral Health to determine the impact of the implementation of the change package on reducing substance use.</p>	2017-2021	Youth ages 12-17	Primary care	<ul style="list-style-type: none"> • Substance use
<p>Kaiser Foundation Research Institute is developing a model to predict (i.e. predictive analytics) the development of SUD among youth, which health care systems and providers can use to deliver cost-effective, targeted prevention and early intervention services.</p>	2016-2019	Youth ages 15-18	Health systems	<ul style="list-style-type: none"> • Not applicable
<p>Iowa State University is exploring whether providing SBIRT as an adjunct to an evidence-based primary prevention model (Promoting School-community-university Partnerships to Enhance Resilience (PROSPER)) strengthens the prevention of risky behavior, promotes positive youth development, and strengthens families.²</p>	2017-2020	Sixth grade students	Schools	<ul style="list-style-type: none"> • Substance use initiation • Substance use risk knowledge and attitudes • Perception of risk • Peer refusal skills • Behavioral problems
<p>Reclaiming Futures is conducting a school-based pilot of a framework that integrates SBIRT with school discipline reform practices, and measuring impact of an SBIRT protocol adapted for youth with JJ involvement.</p>	2019-2021	Youth ages 14-18	Schools	<ul style="list-style-type: none"> • Substance use • Mental health-related symptoms • School discipline
	2019-2021	Justice-involved youth ages 15-18	Juvenile justice	<ul style="list-style-type: none"> • Substance use • Mental health-related symptoms • Justice involvement • School discipline

² Iowa State University’s project is co-funded by the Hilton Foundation and Arnold Ventures. The Hilton Foundation is supporting the implementation and process evaluation. Arnold Ventures is supporting the RCT to examine substance use outcomes of the PROSPER-SBIRT model.

<p>Seattle Children’s Hospital is conducting an implementation evaluation of its Check Yourself electronic software application, and a mixed-methods evaluation of the Best Starts for Kids School-based SBIRT initiative, which utilizes Check Yourself to deliver screening and identify students for BI in middle schools. Check Yourself is a teen-friendly eHealth tool that delivers screening and motivational personalized feedback to teens, and provides a summary report for professionals who work with teens within the setting that they were screened.</p>	2017-2020	Youth ages 13-18	Schools and primary care	<ul style="list-style-type: none"> • Substance use • Readiness and motivation to change • Perceptions of peer substance use • Mental health-related symptoms • Sexual health
	2019-2021	Youth ages 11-14	Schools	<ul style="list-style-type: none"> • Substance use • Intention to use substances • Motivation to change • Mental health-related symptoms • Academic performance • School connectedness • School attendance
<p>University of Minnesota, in partnership with the Kaiser Permanente Northern California Division of Research, is conducting an RCT of an adolescent SBIRT model (MPower) in school and primary care settings. Building upon prior research, this study compares traditional, single-session BI to an expanded BI intervention for teens. The study is testing a group format for SBIRT as well as the inclusion of parents in the SBIRT model.</p>	2014-2019	Youth ages 14-18	Schools and primary care	<ul style="list-style-type: none"> • Substance use • Mental health-related symptoms • Academic performance • Family functioning
<p>University of New Mexico is evaluating the implementation and impact of its Strategic Implementation of SBIRT in SBHCs (SISS) program, which aims to engage youth in SBHC behavioral health services. The SISS trains providers on youth-centered communication skills and an approach that considers substance use respectfully and holistically with the comorbid conditions of depression and anxiety. SBIRT coordinators support the meaningful use of electronic health records to enhance SBHC substance use care.</p>	2018-2021	Youth ages 11-18	School-based health centers	<ul style="list-style-type: none"> • Substance use
<p>University of Vermont is conducting a longitudinal study to assess if its Wellness Environment (WE) program, partnered with SBIRT, is an effective tool to promote health and wellbeing and decrease substance use behavior, in college students. WE is a neuroscience-inspired behavioral change program that provides an alcohol- and drug-free residential community, educational courses, and other resources to promote a healthy lifestyle for participants.</p>	2017-2020	College students	Schools (university)	<ul style="list-style-type: none"> • Substance use • Mental health-related symptoms • Health promotion behaviors